



STATEMENT OF WORK FOR CONSTRUCTION SERVICES

**Motor Pool Parking Deck
Concrete Deck Repair
La Paz, Bolivia**

August 24, 2015



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U.S. DEPARTMENT OF STATE

OVERSEAS BUILDINGS OPERATIONS
Washington, DC

ROOF MANAGEMENT PROGRAM

1.0 BACKGROUND AND PURPOSE

1.1 The U.S. American Embassy La Paz, Bolivia has a requirement to repair the upper concrete parking deck of the Motor Pool, GO property #124, La Paz, Bolivia. A contractor is needed to furnish all labor, equipment and materials to complete the work for this repair. Traffic coating will be furnished by the embassy.

1.2 The existing parking structure has two story decks, with an approximate area of 740 square meters, constructed of flat concrete slab supported on concrete beams and columns. The concrete on the existing upper parking deck surface is cracked, spalled, with areas of exposed steel reinforcement.

1.3 The work consists of, but is not limited to, the following:

1. Removal of all concrete topping (2" to 3" layer thick) over the roof slab including all steel rebar found.
2. Installation of rebar for the new topping layer made of 1/4" steel rebar of 12"x12".
3. Surface preparation, forming, furnishing, placing, finishing and curing concrete repair.
4. Ensure that entire new concrete finish is sloped accordingly to use all existing drains.
5. Removal of all existing concrete parking heads (wheel stops).
6. Addition of water drainage for the cars washing area. COR and contractor shall determine the appropriate slope and size for the vehicles wash area. Drainage shall be made of 4" PVC pipe schedule 40 and connected to drainage system of motor pool.
7. Addition of control joints.
8. Application of traffic coating.
9. Paint yellow parking lines and letters according to COR instructions.
10. Procurement and installation of 16ea wheel stops. Wheel stops shall be approved by COR prior to contractor purchasing wheel stops.
11. Provision and installation of 37m of metallic fence made of three rows of 2"Øx1/8"thick structural tube. The fence shall be painted in black.

2.0 GENERAL REQUIREMENTS

2.2 The Contractor shall provide personnel, material, equipment, and supervision to complete the technical requirements in this Statement of Work. The Contractor shall be responsible for hiring labor, equipment vendors and shall follow security and safety directives as explained by the Embassy. Total Period of Performance to Completion is 90 days with 30 days onsite.

2.3 The Contractor shall have limited access to or be admitted into the Motor Pool outside the areas designated for the project except with permission by the Embassy. The Contractor shall address the impact of the consequent disruption caused by the proposed work and provide for a continuing level of operation of the Motor Pool functions.

3.0 SCOPE OF WORK

3.1 The Contractor shall be required to prepare reports, bill of materials, quality control schedules and construction costs. These documents shall provide the necessary interfaces, coordination, and communication among the Embassy, OBO, and Contractor for the delivery of a complete roof project.

3.2 Logistics:

1. All materials shall be delivered, hoisted on the exterior and stored on the roof
2. Debris removal shall be via a construction chute

3. Electrical source available at site.
 4. Water source available at site.
 5. Provide temporary overhead protection at building entrances
 6. Labor Background checks require a minimum of 21 days for clearance
- 3.3 Removals:
1. Remove damaged cracked, spalled, or improper concrete to expose sound, virgin concrete surfaces. Edges of area to be repaired shall be cut square to a minimum depth of $\frac{3}{4}$ inch so that there are no feathered edges. Contractor shall ensure that the old topping removal shall not damage nor weaken the main slab in any way.
 2. Use light air hammers up to 15 lbs, power saws, or hydro-demolition. Hammers larger than 15 lbs shall only be used with prior approval from the Embassy.
 3. After removal of loose existing concrete to sound concrete, clean the surface of all dust, debris and laitance.
 4. Before concrete repair material is installed, all oil and grease shall be steam or solvent cleaned from all surfaces.
 5. Remove and dispose old metallic fence along the inner wall.
- 3.4 Concrete Repair Materials shall have the following salient features:
1. Shall be a cementitious material that after hardening will remain stable in wet and moist environments and will not dissolve in water.
 2. A 28-day compressive strength of 4,000 pounds per square inch or greater when tested according to ASTM C 39, unless otherwise indicated.
 3. Bond strength of the repair material shall be tested in accordance with ASTM C 882 procedures for Type V material and shall have a minimum strength of 1,100 pounds per square inch at 28 days.
 4. Shall be suitable for application at a minimum temperature of 55 degrees Fahrenheit.
 5. Shall not contain chlorides, added gypsum, added lime, or high alumina cements. Shall not be noncombustible both before and after cure.
- 3.5 Concrete Parking Deck Repair:
1. Clean and prepare existing concrete areas to achieve a laitance and contaminant free surface.
 2. Apply the bonding agent to the whole floor area before pouring the concrete mortar as per manufacturer's recommendation.
 3. Apply by stiff-bristle brush or spray to properly coat the underside of the totally exposed steel. Allow coating to dry before the repair mortar is applied.
 4. Install new control joints at the locations of the existing concrete beams. Control joints shall be $\frac{1}{2}$ " wide x $\frac{3}{4}$ " deep. Control joints will be filled with expansive foam and covered with Sikaflex 1A.
- 3.6 Concrete Parking Deck Traffic Coating:
1. Prior to application of traffic coating, concrete must be fully cured, structurally sound, clean and dry per ASTM D 4263. Traffic Coating shall be provided by COR.
 2. All concrete surfaces (new and old) shall be shotblasted to remove previous coatings, laitance, and all miscellaneous surface contamination and to provide profile for proper adhesion.
 3. Abrasive shotblasting shall occur after concrete repair.
 4. Acid-etching is not permitted.
 5. Prime concrete deck using roller pan and a short to medium nap roller cover, force primer into pores and voids to eliminate pinholes.
 6. Apply 25 wet mils (0.6mm) base coat using a proper notched squeegee at 60 square feet/gallon (1.5 square meter/liter). Allow to cure overnight.
 7. Apply 25 wet mils (0.6mm) top coat using a proper notched squeegee at 50 square feet/gallon (1.2 square meter/liter). Allow to cure overnight.
 8. While top coat is still wet, broadcast aggregate or 16-30 rounded silica sand to

- refusal 50-70 lbs/100 square feet (2.5-3.4 kilogram/square meter).
9. At adjacent wall locations extend coating 1'-0" up wall.

3.7 Repair Products:

1. Sika Armatec 110 EpoCem, Bonding Agent and Reinforcement Protection by Sika Corporation, or approved equal.
2. Traffic Coating, Heavy Duty Traffic System, Sonoguard by Sonneborn, or approved equal.
 - a. Primer: 772 VOC, one component solvent-based primer and sealer.
 - b. Base Coat: One component, moisture-curing polyurethane.
 - c. Top Coat: Tint base, gray color
 - d. Aggregate: 16-30 rounded silica sand.
3. Install in accordance with manufacturers recommendations.
4. The traffic coating products shall be provided by the embassy/COR.
5. Rebar for concrete topping, bonding material, concrete and control joints material shall be furnished by the contractor.

4.0 CONTRACT ADMINISTRATION

4.1 OBO does not make representations or warranties of whatsoever kind or nature, either expressed or implied, as to the quality, level of completion, accuracy, extent of compliance with the standards, codes and requirements described or referred to in this SOW, or the extent of coordination between or among the documents provided to the Contractor.

4.2 Neither the Embassy's nor OBO's review, approval, or acceptance of, nor payment for the services required under this contract shall be construed to operate as a waiver of any rights under this contract or any cause of action against the Contractor arising out of the performance of this contract.

4.3 OBO has the right to inspect and test all services called for by the contract, to the extent practicable at all times and places during the term of the contract. OBO may perform quality assurance inspections [QAI] and to confirm the work is being performed according to the Statement of Work.

5.0 RESPONSIBILITY OF THE CONTRACTOR

5.1 The Contractor shall be responsible for the professional quality, technical accuracy, and the coordination of all construction and other services furnished under this contract. The Contractor shall, without additional compensation, correct or revise any errors or deficiencies in its construction and other services.

5.2 The Contractor shall identify a Project Manager who shall be responsible for the overall management of this Contract. The Project Manager will be approved by the Embassy.

5.3 The Contractor is responsible for safety and shall comply with all local labor laws, regulations, customs and practices pertaining to labor, safety and similar matters. The Contractor shall promptly report all accidents resulting in lost time, disabling, or fatal injuries to the COR.

6.0 CONSTRUCTION REQUIREMENTS

6.1 The Contractor shall be responsible for all required materials, equipment and personnel to manage, administer, and supervise the roof project. All workmanship shall be of good quality and performed in a skillful manner as determined of OBO.

6.2 The Contractor shall have limited access to or be admitted into any building on the compound outside the areas designated for the project except with permission by the Embassy.

6.3 The Contractor will be permitted to use the area within the compound for operation of his construction equipment and temporary facilities. The Contractor is responsible for obtaining any additional off compound storage areas required.

6.4 The Contractor shall be responsible for connection of temporary utilities to existing utilities including water and power. All temporary connections to local water and power shall be coordinated with the Embassy.

7.0 PAYMENTS

7.1 With the approval of the CO the contractor will be able to collect 50% of the total amount of this contract when all concrete topping has been poured and finished. The other 50% can be collected when the whole project has been concluded at the entire satisfaction of the embassy.

8.0 CRITERIA

8.1 The Contractor shall construct the roof deck repair project in accordance with U.S. codes and standards. OBO will review and comment on the Contractor's submissions using the following codes and standards:

1. International Building Code, to include structural load and roof drainage requirements
2. ASTM C 78 - Standard Test Method for Flexural Strength of Concrete.
3. ASTM C 109 - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars.
4. ASTM C 496 - Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens.
5. ASTM C 881, Type II - Standard Test Method for Bond Strength of Epoxy-Resin Systems.
6. ASTM C 1438, Type II – Standard Test for Polymer Modifiers.

9.0 DELIVERABLE SCHEDULE

9.1 The Contractor shall commence work under this contract promptly, execute the work diligently, and achieve final completion and acceptance of the roof project including final cleanup of the premises within the contract period specified.

9.2	Milestones:	
	Award of Contract	September 21, 2015
	Pre-construction Submittals	Within 5 days
	OBO Review	5 days
	Material Procurement	45 days
	Construction	30 days onsite
	Final Cleanup Begins	5 days prior to Completion
	Total Period of Performance to Completion	90 days
	Rainy Season	December – March

9.3 Contractor shall commence the work before September 30.

- 9.4 Project Completion:
- a. Furnish surplus roof materials
 - b. One hard copy and one PDF copy of all maintenance and operating information
 - c. One hard copy and one PDF copy of all catalog cuts and of all items installed.

10.0 SECURITY

10.1 This is a non-classified project. The work to be performed under this contract requires that the Contractor, its employees and sub-contractors submit corporate, financial and personnel information for review by the Embassy. Information submitted by the Contractor will not be disclosed beyond the Embassy.

END OF STATEMENT OF WORK